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# THE FARM INDEX

U.S. Department of Agriculture/December 1972

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RUNNING  
OUT?

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# Outlook

**Outlook for wheat is punctuated with superlatives.** Estimated supplies for the 1972/73 season beginning last July: 2.4 billion bushels, largest since 1962. Exports: 1.15 billion, biggest on record. Total disappearance: 1.9 billion, most ever. Carryover next June 30: 485 million, least since 1967.

All the gain in disappearance—up 29 percent—will be in the export column. Exports are projected to swell more than 80 percent, reflecting what ERS terms an “unprecedented world import demand” plus relatively tight exportable supplies outside the U.S.

Besides purchases by regular customers, the Soviets will take an estimated 400 million bushels in 1972/73, largest purchase of U.S. wheat ever made by a single country. The People's Republic of China, in the first sizable purchase of our wheat in recent years, will take 19 million bushels.

All classes of wheat will benefit from the whirlwind of export activity, but Hard Red Winter—the main class bought by the USSR—will come in for a bigger share of exports than usual. HRW shipments are estimated at a record 710 million bushels.

According to ERS's latest issue of *The Wheat Situation*, bookings of commercial wheat sales increased to 958 million bushels as of early November.

**Domestic wheat use** is figured about 9 percent lower this season than last, due mainly to a 30-percent shrinkage in wheat feeding. Higher wheat prices relative to feed grains are expected to lower feed usage to around 200 million bushels. This nevertheless would still be considerably more than the 140-million average of the 1965-69 period.

Wheat's use in food products is likely to be about the same as last season's 526 million bushels. Hard Red Spring wheat will contribute a bigger share of the mill grind than a year ago, reflecting tight supplies and high prices of Hard Red Winter.

**Farm prices** for all wheat are seen averaging 30-35¢ per bushel above the \$1.25 loan rate. Loan activity has slackened with the rapid rise in farm prices. Through September 30 farmers had placed only 104 million bushels of new-crop wheat under loan. They'd

already redeemed a third of that amount, leaving a net under loan of only 65 million bushels.

**Wrapping up 1972,** the year-end tallies for U.S. farmers are expected to show—

- ✓ 5-percent increase over 1971 in average prices received for crops;
- ✓ 14-percent increase in prices for livestock and products;
- ✓ 10-percent increase in prices received for all farm products;
- ✓ cash receipts for livestock and product marketings of \$34 $\frac{3}{4}$  billion, up more than \$4 billion from 1971;
- ✓ crop marketing receipts slightly above 1971's \$22.6 billion;
- ✓ total cash receipts (plus Government payments) of around \$65 billion, up \$5 $\frac{1}{2}$  billion;
- ✓ production expenses of almost \$47 billion, up \$3 billion;
- ✓ net farm income of around \$18 $\frac{3}{4}$  billion, up \$2 $\frac{3}{4}$  billion from last year's \$16.1 billion and topping the previous record of \$17.1 billion set in 1947.

**As for 1973,** economists say farmers can look forward to a net income total near this year's high figure . . . and to continuing price strength, except that the improvement will be less than in early '72. Whereas egg prices will be significantly higher, the rest of the live-

stock group will probably average out to around the 1972 level.

“Expectations of climbing production expenses may be the major dark cloud on the farmers' 1973 economic horizon,” economists believe. Indications are the trend set this year will carry into next. Prices paid by farmers in '72—for production items, taxes, and wages—climbed 5 $\frac{1}{2}$  percent (preliminary estimate) from a year earlier.

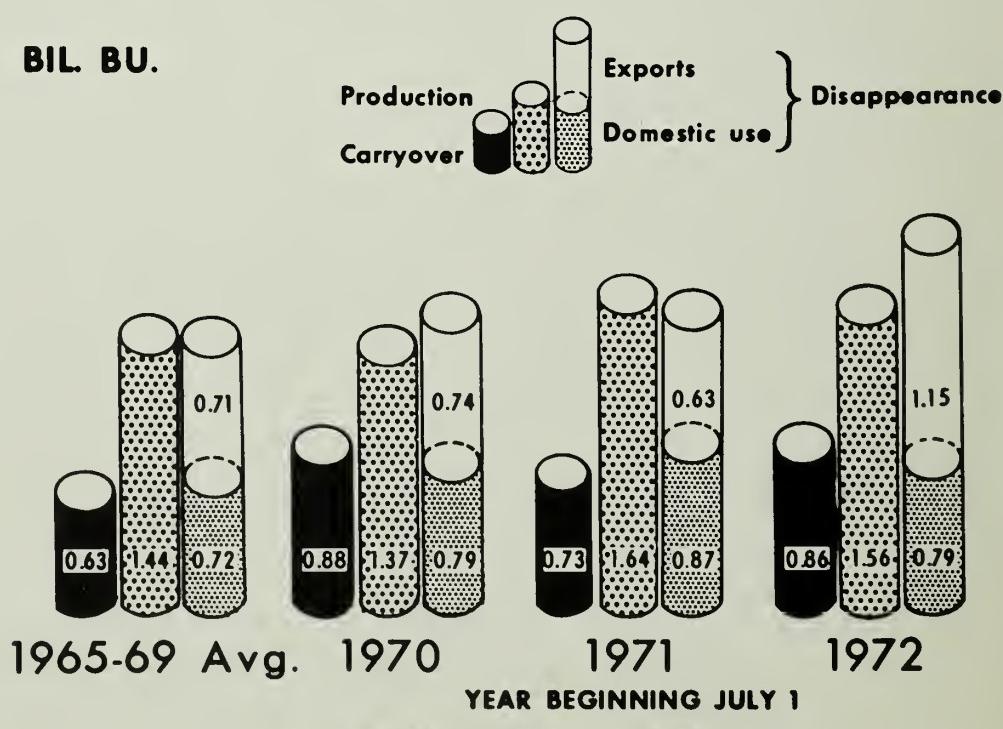
**The Nation's food basket will be well stocked next year.** There will be a greater abundance than in 1972 of both crop food and livestock food commodities.

Assuming normal weather and continuation of past trends, the overall expansion could approximate 3 percent. The increase in crop food commodities might even reach 4 percent. Civilian use of foods produced by U.S. farms also will turn upward, though less than the potential growth in production.

ERS's November issue of *The National Food Situation* sees more beef on the horizon, more pork, chickens, turkeys, citrus fruits, and possibly fresh and processed vegetables. Output might fall a bit short of 1972 levels for veal, lamb and mutton, eggs, and milk for drinking.

## WHEAT SUPPLY AND DISAPPEARANCE

### BIL. BU.



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In terms of food prices, the production outlook could mean slower advances in the retail food price index in the first half of '73 compared to a year earlier . . . increases may average 3 percent above the 1972 period. For 1972 as a whole, the retail index will average 4 to 4½ percent more than last year.

As in 1972, much of the retail price gain in the first half of 1973 will come from livestock related foods. Beef prices in January-June will move up as consumer demand keeps pace with larger output. Pork prices are expected to stay near the fall 1972 levels. Fish prices will average well above a year ago, reflecting the uptrend in demand. Poultry prices should be only a shade above the first half of 1972. Egg prices will be sharply higher than this year's depressed levels but will still average less than in 1970. Small increases seem in prospect for dairy prices.

Of the crop commodities, look for higher retail prices for non-citrus fruits in the next 6 months than a year ago, although citrus prices may average lower. Prices will be well above 1972 averages for potatoes, processed fruits and vegetables, fresh vegetables, coffee, and cereal and bakery products (due to increased prices of wheat). Prices of major food fat products will average slightly higher.

**Production of U.S. shorn wool,** grease basis, slipped 4 percent this year, and more of the same could be in store for 1973. Reason is this year's relatively large sheep and lamb kill will leave fewer sheep to be shorn next spring and summer.

Reduced wool output, with a drawdown in commercial stocks, will keep growers' prices firm. Next year's prices should average moderately higher than in 1972. Despite the prospect of price increases in raw wool, mill use of apparel wool in 1973 may hold near this year's 140-145 million pounds, scoured basis.

But U.S. consumption of carpet wool may be off slightly as a result of sharp advances in carpet wool prices that are weakening wool's position vis-a-vis manmade fibers.

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## FOREIGN

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# A Half Century of Economic Research

*During the past 50 years, agricultural economists in the Federal Government have dealt with the most rapidly changing farm scene in the history of this country.*

Talk to a modern farmer and you'll probably discover a man who depends on economic research.

So important are the findings of agricultural economics today that they play a vital role at every point in the food and fiber industry, from buying and utilizing inputs to processing and marketing the finished product.

When does it pay a farmer to invest in a bigger tractor or adopt a new hybrid? When should he expand his operation, convert to a different crop, or sell his products? What's really happening out there in the farm sector . . . to domestic markets . . . to foreign demand? How can farm income be raised and consumer needs be met more efficiently?

The answers come from agricultural economists. Chances are they come from economists in USDA who

this year are marking the fiftieth anniversary of agricultural economic research in the Federal Government.

Actually, the roots of this particular Government activity go back further than the formal founding date.

As early as 1839, Congress assigned \$1,000 to the Patent Office for the collection of agricultural statistics. This was one of the first functions undertaken by the Department of Agriculture when it was organized in 1862. By the turn of the century a steady stream of reports was flowing out of USDA.

The agricultural crisis after World War I focused national attention on the farmer's economic plight.

**Birth of BAE.** When farm prices neared an alltime low in 1922, the Department, under Henry C. Wallace's leadership, tried to reverse the dismal trend by marshalling all its economic resources in a new organization. The result was the Bureau of Agricultural Economics (BAE).

"The real work of the new Bureau of Agricultural Economics," said Henry C. Taylor, first head of the agency, "is to put the farmer and

the dealer in farm products in possession of the facts they need in order to act wisely in all these problems of production and marketing and to provide such service and supervision as will tend to establish efficiency and fair play in the marketing of farm products."

This philosophy led to forecasting work and to the first Annual Outlook Conference, held in 1923, to make the economists' findings readily available to farmers and other members of the agricultural community.

Agriculture continued in trouble during the twenties, a period when the economy was heading for disaster. In the fall of 1929, the U.S. crashed into the worst depression of its history. And farm prices led the downward spiral.

With the coming of the New Deal, USDA's policymakers began looking for new ways of adjusting production to demand and raising farm income. Economic research was enlisted to aid in the development of new programs.

The Agricultural Adjustment Administration, Commodity Credit Cor-

**"A knowledge of the setting in which farmers operate and a knowledge of the trends of the times are essential to lighting the pathways of progress . . ."**

poration, and Federal Crop Insurance Corporation were just three of a host of important measures born during the thirties that owed their existence wholly or in part to the work of agricultural economists.

Toward the close of the decade, the Department's economic research shifted emphasis to planning. The new objective was to coordinate Federal, State, and local programs in particular regions, drawing them together to launch a hydra-headed assault on the Depression's lingering remnants.

It was an ambitious and controversial goal, criticized within and outside the Government. It was also short-lived, partly due to the U.S.'s entry into World War II.

**Wartime mandate.** During the war years, economic researchers concentrated on problems associated with the effort to push agricultural production to its peak, with shortages caused by the conflict, and with the needs encountered by wartime agencies such as the Combined Food Board and the Office of Price Administration.

Soaring demand gave the farm sector new life. Corn production shot up by more than 400 million bushels between 1940 and 1945. Cattle increased by 22 million head, hogs by 13 million, and in 1944 the wheat crop broke the old record of 1.08 billion bushels that had stood since 1915.

The main task facing agriculture in the immediate postwar period was finding a way to ease the farm sector back into a peacetime framework without a disastrous depression such as followed World War I.

Scarcely did the job near completion than the Korean war resur-

rected the need for many of the old emergency programs.

By this time, agricultural economics had established itself as an integral part of a number of Department agencies. During the previous decades several of the BAE's early functions had been passed on to other USDA organizations. Less than 5 months after the end of the Korean war, the Department disbanded the Bureau, dividing its remaining duties between the Agricultural Research Service and the Agricultural Marketing Service. The purpose was to bring together "the appropriate team of scientists and researchers to attack particular problems."

"The problem approach" to economic research held sway in the Department from 1953 to 1961. Stress was on marketing to handle surplus production.

Yet the advantages of having an agency in the Department specifically charged with conducting economic research were so great that in the early sixties, USDA established the Economic Research Service as a successor to the old BAE.

### **BAE's Offspring**

Besides the Economic Research Service, four agencies in today's Agriculture Department trace their beginnings back to the Bureau of Agricultural Economics or the operations that were combined into the Bureau in 1922: the Agricultural Marketing Service, Farmer Cooperative Service, Foreign Agricultural Service, and Statistical Reporting Service.

The old BAE did more than economic research.

It administered no less than 10 regulatory acts at various times, ranging from the Cotton Futures Act of 1916 to the Tobacco Inspection Act of 1935.

The Bureau also provided market news, handled research on transportation and marketing facilities, and graded foods.

In time, these and many other former jobs of the BAE became so complicated that no one agency could perform them all. (2)

A leading U.S. economist explained the reasons—

"When the work is properly organized in a favorable environment science grows, methods of research continually improve, knowledge accumulates and enables men better and better to understand the world in which they work. A knowledge of the setting in which farmers operate and a knowledge of the trends of the times are essential to lighting the pathway of progress as well as to diagnosing ills."

**New backdrop.** The agricultural scene that today's economists study is the most complicated and rapidly changing in U.S. history. Fifty years ago, when the BAE got underway, 30 percent of the population lived on farms. Today the figure is less than 5 percent. In about the same period, the number of Congressional districts across the country with 20 percent or more farm population has tumbled from 251 to 47.

Thanks to a multitude of advances, ranging from new machines to new management techniques, the U.S. today boasts a higher farm output than ever before.

But at least one old problem remains: farmers continue to earn substantially less than nonfarmers.

**Maze of problems.** And a long list of modern challenges now keep this old enemy company. Increasing public concern over environmental protection, poverty, national nutrition, the condition of rural America, and a variety of other issues has revealed new problems that demand the attention of agricultural economists.

Today's researcher, therefore, does more than analyze markets, forecast prices, and study economies of size. The complexities of modern agriculture and its intricate relationship to the rest of the economy mean that he must answer needs that went unrecognized 50 years ago—or, perhaps, that did not exist at all. (1) [First in a series of articles about work of agricultural economists. The next will feature outstanding economists and their achievements.]

# CHARTING A SMOOTHER COURSE FOR EGGS

*Zeroing in on nettlesome problems of the U.S. egg industry, a marketing team suggests ways to spur demand and smooth out peaks and troughs in egg prices.*

It's long been one of the egg industry's major problems: instability of output and prices. Hence, instability of income for the egg producer.

And so this was one of the leading problems considered by USDA's egg marketing team when it began its study of the egg industry earlier this year. Unlike many other businesses, the egg industry has not had the cushion of increased demand within which to solve its supply problems.

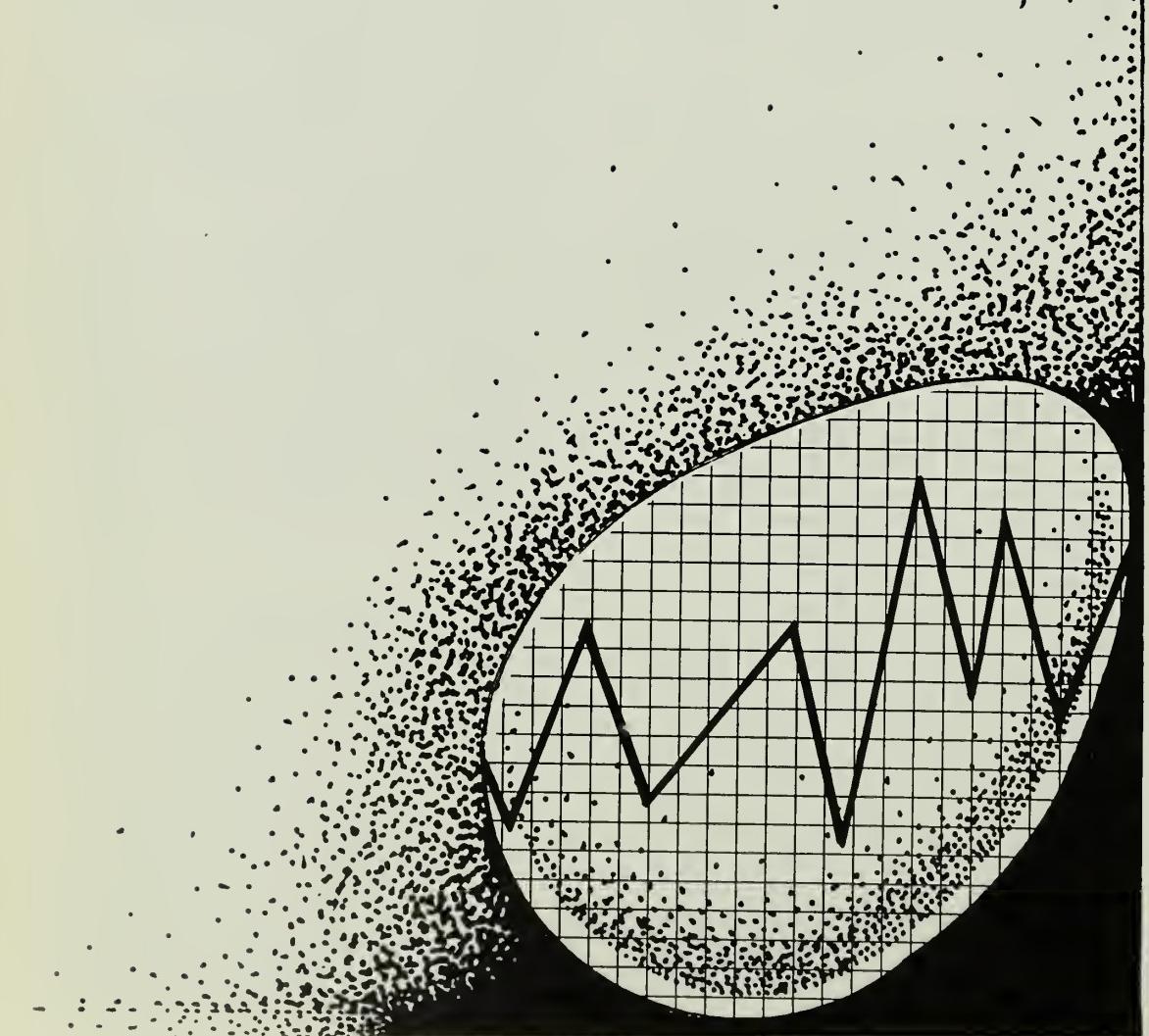
**Demand drops.** Per capita demand for shell eggs has dropped sharply since World War II. Back then, each American ate roughly 385 eggs per year—compared with about 322 today. Mainly blamed are changing eating habits—particularly the shift away from large breakfasts—and adverse publicity linking cholesterol (which egg yolks contain) to heart disease.

Because shell eggs lack any close substitute, have no large secondary market, and are largely preferred as a fresh product, demand is highly inelastic. The result: slight changes in egg supplies produce large changes in prices.

Instability of output and prices plague the industry on both a seasonal and a cyclical basis.

Seasonal oversupplies stem from traditional layer hen placement patterns that cause production to peak in the spring months. Producer prices usually bottom out in May, and pick up as supplies begin to contract later in the year.

**Lengthy price dips.** Of greater concern is the egg price cycle. Unlike seasonal ups and downs, cyclical fluctuations in recent years have been marked by long price troughs and short price peaks. Cyclical price movements of 3-4 years duration since 1965 have resulted from unexpected changes in demand, and technological advances that produced



sharp increases in supply.

The egg marketing team cited several methods to stimulate demand and alleviate price depressions.

To smooth over seasonal price dips, the industry should step up promotion of fresh shell eggs. The value of eggs as a protein source, and favorable consumer prices should be emphasized. This may prove the quickest way to ease seasonal surpluses, as table eggs move through marketing channels in a matter of days.

**Processed eggs.** A second move against low seasonal returns is to develop processed egg products that are easy to prepare, have long shelf lives, and are acceptable substitutes for other food products. Manufacturers would tend to concentrate production when prices are seasonally low.

The marketing team also recommended that government agencies that regularly purchase eggs for various distribution programs should expand and coordinate purchases during low seasonal price periods.

Regarding prolonged lows of the egg price cycle, the egg marketing team noted that demand expansion programs should make reasonable price levels their goal. This is to prevent prices from dropping so low that producers incur large losses or leave the business in excessive numbers.

**Clearing the market.** The team added, however, that prices should not be maintained at such high plateaus that markets aren't cleared and public agencies accumulate large supplies.

The marketing team saw promotion and development of processed egg products with wide consumer appeal as one way to smooth cyclical as well as seasonal price depressions. Substantial demand for processed egg products might give rise to a broad base egg market with a relatively stable "floor" price.

The egg team noted that government programs might have to be expanded considerably during long price troughs. For example, foreign

distribution of high protein egg products might be enlarged under P.L. 480.

Many developing nations are approaching self-sufficiency in carbohydrate feeds, but most lack sufficient protein foods. Large quantities of shell eggs could be processed into foods with built-in appeal for consumers in these countries.

Expansion of the School Breakfast Program, which uses large amounts of both shell and processed eggs, would provide a broad domestic outlet.

The School Breakfast Program currently feeds 1 million breakfasts a day (180 days a year) in 8,000 schools. Enlargement to 30,000 schools and 4-5 million breakfasts a day is under consideration.

Several other programs that could increase demand are the Nonschool Feeding Program, conducted during the summer months, and the Child Day Care Center Feeding Program.

Another possibility is USDA's Commodity Surplus Disposal Program, which provides surplus commodities to the needy. During periods of low egg prices, large shares might be purchased for current and future distribution. Purchases could be moderated as prices rise.

Though government programs can have a significant impact on egg use, the egg industry itself must play a larger role in lifting demand.

**Limits on expansion.** The marketing team also cited the need for limits on supply expansion as fundamental to realizing long-term benefits from increased demand.

Previous promotion efforts by the industry have often been fragmented, underfinanced, and short-lived. The marketing team suggested that promotion could be better coordinated if funded through a national "checkoff" program.

Under the program, egg producers would contribute a set amount per case to a national egg board. The funds would be used—according to predetermined guidelines—to finance promotional and research efforts on a pervasive, nationwide level. (3)



### Tree Talk

Beneath the tinsel, money grows on Christmas trees.

Retail sales of fresh trees approximated \$210 million in 1971, and this year's receipts should run higher according to estimates of USDA's Extension Service.

Some other facts about this business—

Last year some 35 million trees were cut for Christmas from farms and plantations that manage 450,000 acres. Almost every State produces Christmas trees, but the production centers are the Lake States, the Northeast, and the Northwest.

An increasing share of tree marketings are by the "choose-and-cut" system, where the customer goes directly to the farm to make his purchase. In 1971 about 10-15 percent of sales were by this method.

The Christmas tree industry provides full-time jobs for 7,500 people in rural areas, and part-time jobs for another 100,000, chiefly high school and college students.

Industry surveys show natural trees still have a slight edge over the artificials, with natural trees turning up in 35-37 percent of the households sampled. Thirty-three percent had artificial trees, 2 percent both types, and the remainder, no tree at all.

Asked about the inroads by the manmade variety, a spokesman for the 3,100-member National Christmas Tree Growers Association said growers are concerned over the competition but they are able to market just about all the fresh trees they produce. A bigger problem is getting enough top quality trees.

Confident of expanding their market, growers next spring will plant about 85 million seedlings for harvest 6 to 12 years from now. So, for every tree cut in 1972 there will be two or three to take its place. (5)



# FARMLAND ARE WE RUNNING OUT?

*We have better than 2 billion acres of land in the U.S., most of it agricultural. An ERS study takes note of how it's being used, how it's changing . . . and how it may be used by the year 2000.*

Each year for the past 10 years, like giant hens, cities have pulled nearly three-quarters of a million acres of countryside under their wings.

Roads and airports covered another 130,000 acres of rural land, and reservoirs engulfed still another 300,000 acres annually.

Together, they gathered up more than a million acres each year that

may never again be used for agriculture.

Another 2 million acres on the average have gone out of rural land annually since 1959 into what are considered "reversible" uses for recreation and wildlife areas.

The average American may begin to feel he's in the path of a concrete flow from some urban volcano. Will there be any land left for agriculture?

Natural resources experts in ERS, in a comprehensive land and water study, firmly spell out that we're not in a bind for agricultural land, nor are we expected to be by the year 2000. Of the Nation's more than 2

billion acres, agricultural uses continue to be the dominant use of the land and are still expected to account for more than half the land area in 2000.

Looking at the national picture permits one to gloss over some serious land use problems. Many people feel real concern about the loss of good cropland to cities, or for roads. Strip mining lays waste to large areas. Drainage of wetland destroys wildlife habitat. Just how critical is the supply of land for all the uses we make of it?

**Productivity upswing.** Actually, we need less land than ever for food and fiber because of greatly increased production per acre. The amount of cropland used decreased by more than a tenth from 1950 to 1970 as production per acre increased by half, outpacing population's increase of a third.

Overall, the way land is used in the U.S. has remained virtually unchanged since 1950. Cropland takes about a fifth of the land, grassland pasture and range about a fourth, forest land about a third, and wasteland an eighth.

**Urban areas double.** Although urban areas claim twice as much land as they did in 1950, they still occupy only 1½ percent of total land area. Despite expanded highway and airport facilities, land used for transportation still takes only 1 percent of the land. Many new roads were built on existing rights of way and some roads have been abandoned.

A significant change since 1950 has been the 20-million acre increase in land used for recreation and wildlife areas, now occupying 4 percent of our land. Much of this increase was in Alaska. For the most part, this increase in recreation and wildlife lands resulted from a change in classification, and not in land cover.

The proportion of land in various major uses is different for the 48 contiguous States than for the entire U.S. Across the 48 States there's been no appreciable overall change in land use in the past 20 years—crop-

land still totals a fourth of the land; forest land, a third; grassland pasture and range, a third, and wasteland, 3 percent. Urban land has doubled, amounting to nearly 2 percent of total land area, and transportation land remains less than 1½ percent of total acreage.

The predominant use of land varies greatly. In the Corn Belt and Northern Plains, more than half of the land is cropland. In the Southern Plains and Mountain States, pasture and rangeland predominate. In the Northeast, forest land is the major use of the land, as it is in the Appalachian, Southeast, and Delta States and the Pacific Coast north of San Francisco.

**BIGGEST LAND USER.** The more than 1 billion acres—half the Nation's land—that is in farms is used mostly for crops and livestock. Farmers use an additional 300 million acres of non-farm land for grazing. In total, agricultural production takes up 57 percent of the U.S. land area.

Another third of the Nation is in forest land, including some used for grazing.

Land used for crops, pasture, and forests total 1,811 million acres—80 percent of the total U.S. land area of 2,264 million acres.

Despite the stability of land use proportions, there have been significant shifts and changes within land use categories in the past 20 years.

**More idle cropland.** Although cropland continues to take a quarter of the 48 States as it did in 1950, acreage actually used for crops has been decreasing at an average of 2 million acres a year. Idle cropland, meanwhile, has increased about a million acres a year. Thus the net decrease is about a million acres a year. The increase in idle cropland, in compliance with Federal supply management programs, resulted from a 50-percent increase in cropland productivity since 1950. This great productivity increase stems from more efficient farm organization, improved machinery, increased use of agricultural chemicals such as fertilizers and pesticides, additives

to livestock rations, improved crop and livestock species and management, more irrigation, and regional shifts in production.

While total cropland has been declining a little each year, the trend by region is varied—some areas actually have an uptrend in cropland while others show significant abandonment.

New cropland has come almost entirely from a few specific areas: Florida, where land was reclaimed through drainage and irrigation projects . . . the Delta States, where land was reclaimed through clearing and drainage . . . the Texas High Plains, California, and Washington, where irrigation was expanded . . . northern Montana, where improved dryland farming techniques were undertaken . . . and the Corn Belt

through various farm-oriented techniques such as drainage, clearing, contouring, and leveling.

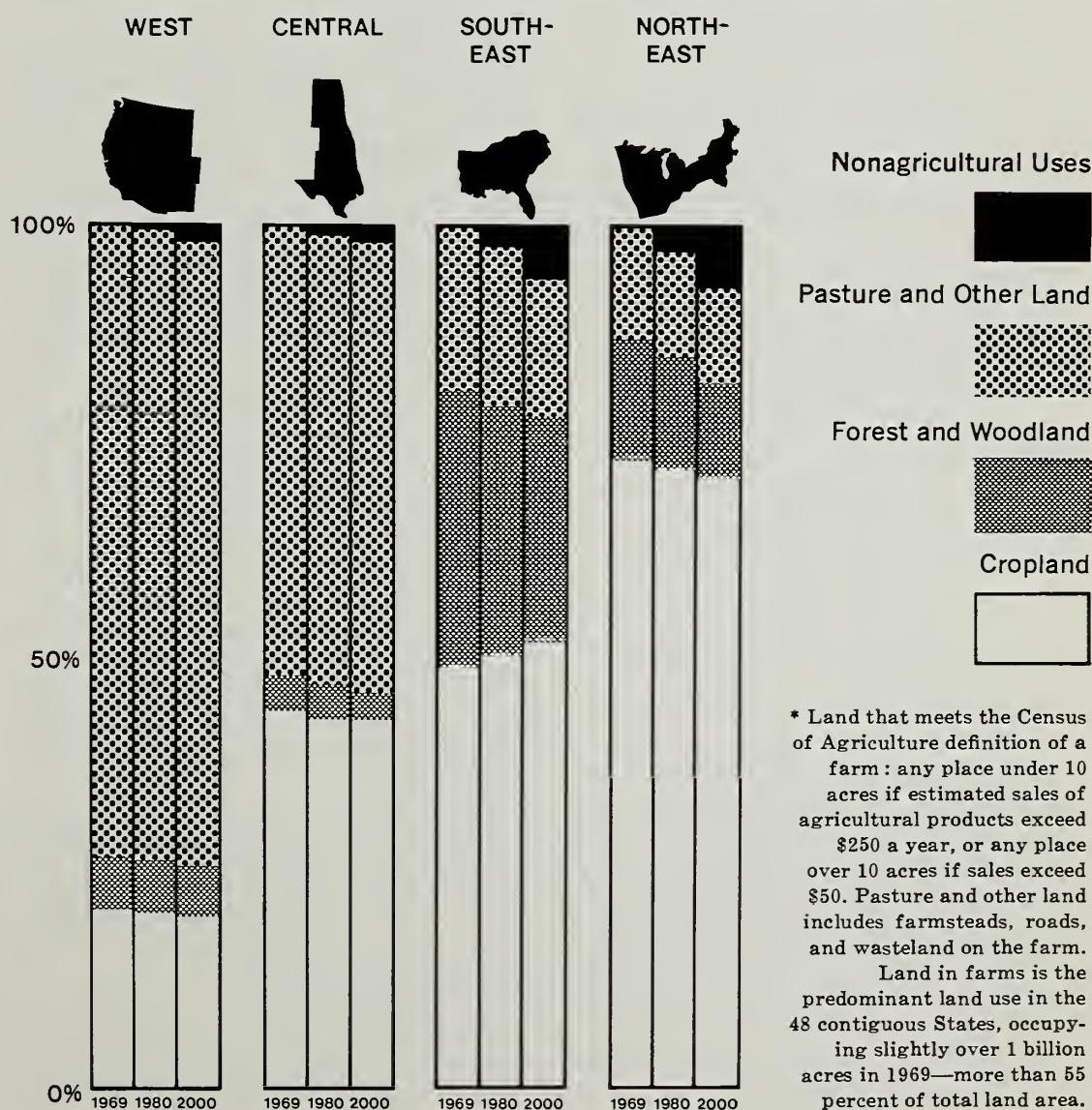
Cropland was abandoned on a large scale in States south and east of the Corn Belt except the Delta and southern Florida.

East of the Mississippi, land was abandoned because of low soil fertility and terrain not adaptable to efficient use of modern machinery. Many fields were small, rough, and isolated.

**Less pasture and range.** There's been a 13-percent decrease over the past 2 decades in the land on which livestock graze. Much of this land was woodland and low in productivity for grazing.

Altogether, pasture and range land occupy 39 percent of the land in the 48 States. Total acreage of

#### TODAY'S FARMLAND—HOW IT MAY BE USED BY YEAR 2000 \*



grassland pasture and range has remained virtually unchanged since 1950 in contrast to woodland grazed.

**Forest land.** Total land in forest, at 754 million acres, has accounted for a third of the land area in the U.S. for many years. About a sixth of this land is in Alaska, where very little is harvested for wood products.

Of the 633 million acres in the 48 States, almost 80 percent is commercially productive.

About two-thirds of the total forest land and three-fourths of the productive forest land lies east of the Plains States. Practically all of this eastern forest land is classed as producing 20 or more cubic feet of useful wood growth per acre per year.

The greater share of current net wood growth is in the East, where growth exceeds harvest and losses by a sizable margin—despite the increased harvest for pulp and plywood. However, only a third of the tree volume is softwood, while the harvest is 63 percent softwood.

**Nonagricultural land.** Of the 20 percent of the Nation that is not cropland, grassland pasture and range, or forest, two-thirds is essentially wasteland. This includes deserts, swamps, bare rock, tundra—land that would have low value generally for agriculture or any other purpose except mineral extraction.

What's left is 178 million acres, or about 8 percent of total land area. This is the land with which the vast majority of Americans are most familiar. A third of it is urban or transportation land. Two-thirds of it is mostly parks, wildlife areas, and public facilities such as military proving grounds.

**NOW FOR A LOOK AHEAD.** Analyzing trends in population, production, and land use, and projecting changes to the year 2000, ERS concludes agriculture will have no difficulty meeting the country's needs for food and fiber (excluding forestry products).

Total U.S. population is projected at 307.8 million for the year 2000, 50

percent over 1970 and more than double the population in 1950. Total real personal income is projected at \$2,551 billion—up from \$689 billion in 1970, and real per capita personal income, \$8,289—up from \$3,388 in 1970.

Under these assumptions, the domestic use of farm products is expected to rise 55 percent in the next 30 years, allowing for the projected population increase plus a small gain in per capita food consumption.

**By 2000.** With land development following recent trends, ERS projects that by the year 2000 there will be a 3-percent decrease in land in farms.

Of the nearly 34 million acres going out of farming, 22 million would be for urban expansion, including highways and airports. This would have an insignificant effect on land available for agricultural production nationally, but could have a major impact around the current growth centers.

Another 7 million acres are projected to go from agricultural uses to recreation and wildlife areas. The increase would mean some reduction in farmland where land is acquired solely for recreation. But where recreation is introduced as a multiple use of land, a decrease in the agricultural land base needn't necessarily follow.

The remaining 5 million acres projected to leave agricultural land in farms includes land for public facilities such as national defense, second home communities, and water control reservoirs, and for such other uses as strip mining. Although the projected land area for surface mining won't adversely affect agriculture nationally, it could have significant impact in local areas and on the water supply.

**Energy crisis.** In some areas, agriculture may experience adverse effects from the emerging energy crisis due to the development of coal and oil shale resources.

Nationwide, the projected 34 million acres going out of land in farms over the next 30 years won't have

much effect on production. While there is some shifting between uses, the net change amounts to 1½ million fewer acres of cropland, 13 million fewer acres of forest and woodland, and 19½ million fewer acres of pasture, range, and farmstead. Altogether, it's a little over 3 percent of the more than 1 billion acres of land in farms in 1969.

**Great impact.** But by region, it's apparent that there will be great impact in some areas, particularly the Northeast. In some parts, little agricultural land will remain.

Of the nearly 210 million acres in farms in the Northeast in 1969, 7 percent—nearly 16 million acres—are expected to shift to nonagricultural use by the year 2000. Cropland will decrease from nearly 159 million acres to 155 million; forest and woodland will decrease 6 million acres to 24½ million, and pasture, range, and other agricultural land will be reduced by almost 6 million acres, to 23 million.

**Southeast shifts.** The Southeast also shows considerable decrease—a net of nearly 9 million acres from the nearly 151 million acres in farms in 1969. However, cropland acreage is projected to increase by 4½ million acres, with additional clearing of forest land and draining of wetlands. Forest and woodland acreage is projected to decrease by nearly 9 million acres, and pasture, range, and other agricultural land, by nearly 5 million acres.

However, in the Central and Western States, agricultural land is projected to be reduced by only about 2 percent—or about 6½ million acres in each region—compared to the 6- and 7-percent decreases in the Southeast and Northeast.

By 2000, some 222 million acres out of the Nation's total acreage of more than 2 billion—or about a tenth of the land—is projected to be in nonagricultural use. Most of the additional land would be for urban and other built-up areas. (6)

[First in a series based on a land and water study by Natural Resource Economics Division, ERS.]

## Rural Bankers Reveal Lending Guidelines

How does a banker size up potential agricultural borrowers?

Commercial bankers in the South Central Great Plains, according to a recent survey, determine an individual's loan limit by measuring his:

- ✓ current financial situation;
- ✓ past repayment performance;
- ✓ available collateral; and
- ✓ purpose of the loan.

Bankers were asked if a farmer's participation in Government programs also affected his loan limit. Some bankers replied that if participation is a farmer's most profitable alternative, it should be a requirement for securing a loan.

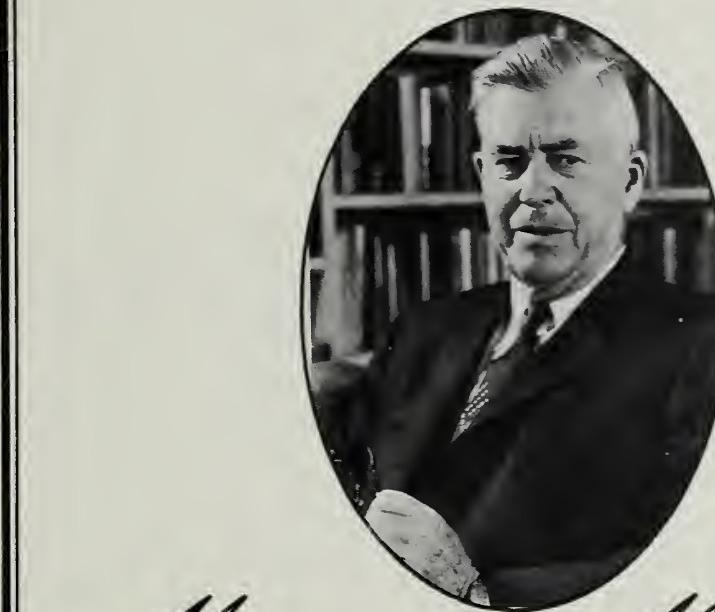
Though the bankers indicated they didn't analyze the effects of Government programs on individual situations, most said they considered Government payments when projecting the gross income of the borrower.

Land was generally not used as collateral on short- or intermediate-term loans. However, bankers said they allowed substantially higher loan limits on full and part owners than on full tenants. Full tenants must secure loans with machinery and equipment or a compensating balance.

Bankers felt that the borrower's tenure status, loan purpose, and overall financial condition were more important in setting collateral requirements than size of the loan request. Nevertheless, some banks required that collateral equal at least 30 percent of the loan value.

The prevailing interest rate in the South Central Plains was 8 percent at the time of the survey (February 1972), though 9 percent was generally quoted in the western part.

Individuals who ranked in the bankers' "best risk" category could secure loans at 7½ percent annual interest. Borrowers that were considered poor risks were often charged at least 9 percent. Some of the banks reported outstanding loans carrying a 10-percent annual interest charge. (8)



## Men and Milestones

*WASHINGTON, D.C., February 12, 1933—President Roosevelt asks Henry A. Wallace to serve as Secretary of Agriculture.*

The Great Depression held the Nation in its grip when Henry Wallace moved into his Washington office in the building at the corner of 14th St. and Independence Ave. and began considering how to pull the farm sector out of the crisis.

Armed with formidable credentials as a farm editor and geneticist, the young Secretary, himself the son of a former Secretary, spent more than 7 years in the Department restructuring it from a strictly research organization into an action agency dedicated to raising farm income and saving the soil.

Today's agricultural programs are largely the direct descendants of initiatives taken during those formative years.

Wallace was born on a farm near Orient, Iowa, in 1888 and educated at Iowa State College. In 1921 he took over the editor's chair of *Wallace's Farmer* from

his father, Henry C., who that year became Warren Harding's Secretary of Agriculture.

As editor of one of America's most influential farm magazines (and one that had been in the family for three generations), Henry A. Wallace expanded the frontiers of agricultural journalism, emphasizing statistics, economics, and genetics, and championing the cause of farm parity.

It was from the magazine that he went to join Roosevelt's official family—first as Secretary of Agriculture, then, from 1941 to 1945, as Vice President and, finally, as Secretary of Commerce.

After an unsuccessful bid for the Presidency in 1948, Wallace retired to his New York farm where he again took up journalism and genetic experiments. He was involved at this time in efforts to conquer hunger by sharing technology and food surpluses with needy people around the world.

Henry A. Wallace died November 18, 1965, 11 years after Congress enacted Public Law 480, implementing many of his ideas on food assistance. (9)



# EXPERTSOK AT POTENTIAL FOR U.S. BEEF PRODUCTION

**C**irca 1980, the pessimist said, supermarkets will advertise beef as "the early bird special"—meaning, if you don't get it early, you might not get it at all.

Draw a big "X" through that prediction. The U.S. cattle industry won't let it happen.

Beef will not become a scarce commodity from the way things are going.

According to a nationwide opinion poll of 295 experts in the livestock raising industry, cattlemen will rise to the challenge of upping beef output by a third between now and 1980.

That's the increase needed to meet the projections for consumption. ERS foresees total beef use as reaching 29 billion pounds in 1980, or enough to allow consumption to climb to around 127 pounds per person from this year's 114.

**Experts' credentials.** The panel of experts were selected for their ability to help shape the future of cattle raising in their States. Holding positions of leadership or decisionmaking, the 295 experts included State and area extension specialists in beef, milk, forage production, and farm management and livestock marketing; directors of State beef cattle associations; prominent cattle producers; and persons from financial institutions.

ERS asked the panel members, who remained anonymous to one another, to assess the future potential of U.S. beef production. Specifically, each expert was to estimate the relative importance of certain factors and the rate of adoption of production practices that would affect the number of cows in his State and the

productivity per cow.

The panel gave cattle prices a high ranking among factors influencing cow numbers. The consensus was that the price of a choice steer calf (450-500 pounds) would have to exceed \$35 per 100 pounds to give strong encouragement to expansion of the beef cow herd. Moreover, the experts generally expected to see prices top that level. Measures to reduce the farm beef price below the necessary level could seriously threaten the industry's ability to meet the expected demand.

**Grand tally.** All factors considered, beef cow numbers nationwide were estimated at 46 million head in 1980—9 million more than in 1970. A herd of this size could supply nearly 23 billion pounds of beef. Adding production from the dairy herd (estimated at somewhat over 4 billion pounds) and net imports (almost 2 billion pounds) gives the total beef supply in 1980 of 29 billion pounds.

Why so much attention to beef cows in this study? As explained in the ERS report which summarizes the opinion poll, the U.S. beef cattle industry has neared the end of a major development phase.

During 1950-70, beef production doubled. Cattlemen did this by (1) switching from dairy cattle to beef cattle as consumption of dairy products dropped, and (2) by feeding grain to a larger share of the calf crop to bring animals up to 1,000-pound slaughter weights, rather than slaughtering them as calves.

**End of an era.** Now nearly all calves are being placed on feed, so increased grain feeding offers limited potential for adding to the beef supply. And though the dairy-to-beef shifts may continue, this also is approaching the



completion stage for the most part.

Thus, the major addition to the beef supply during the seventies has to come from expanding the number of beef cows.

The experts expected increases in cow numbers in all regions and all

States, except in the Northeast for which no projections were made because beef production is of minor importance.

There will, however, be great differences among States and regions in both relative and absolute growth

in beef numbers. Generally, the humid regions—where crop-livestock farms predominate—will show the largest expansion relative to other areas. Most of the expansion in beef cow numbers in regions where specialized ranching is common will also occur under mixed crop-livestock systems.

Here's a brief rundown of the regional prospects as viewed by the experts:

**Cows in the Corn Belt.** This region will enlarge its beef cow inventory 37 percent during 1970-80 to 6.7 million, with four-fifths of the increase in Missouri and Iowa. In Illinois and Indiana, expansion will be small due to the high proportion of good land and intensive row crop farming. Overall increases in the Corn Belt will reflect further enlargement of farms, favorable prices for feeder calves and a shortage of feeder cattle in the region, also relatively low grain prices and strong potential for forage production. Beef cow enterprises should not be encumbered by the waste management problems associated with large cattle feeding and hog operations.

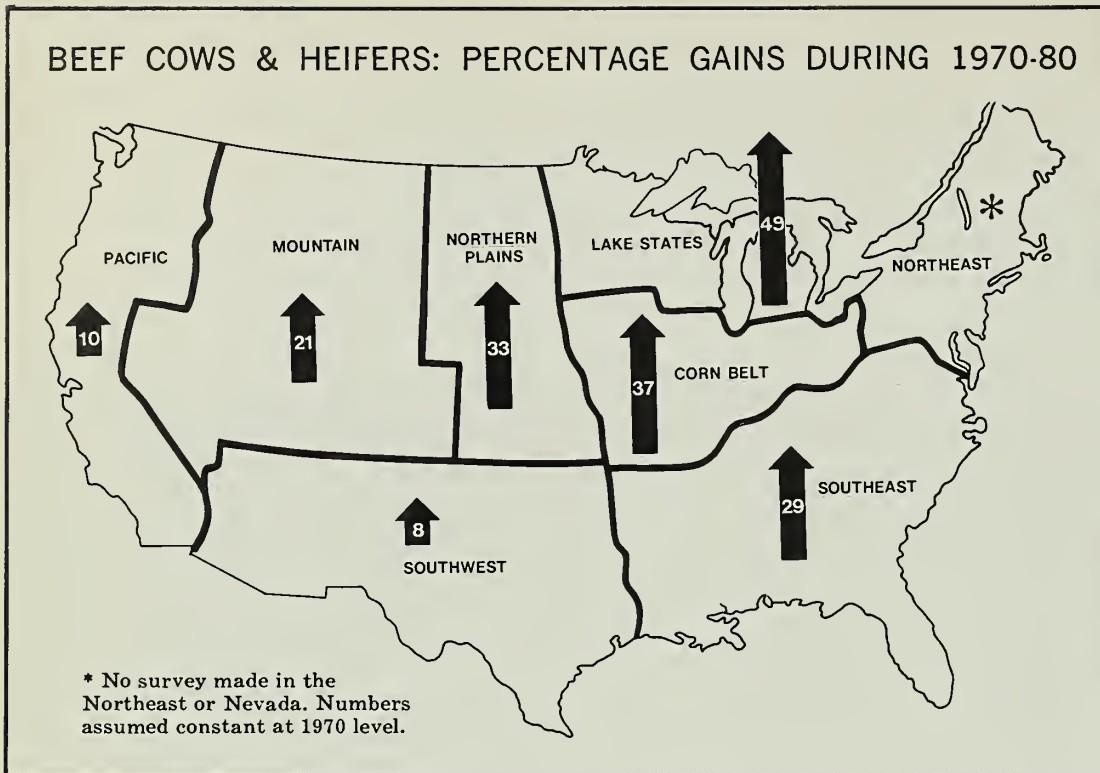
**National pacesetter.** The Lake States are expected to have the sharpest increase among major cattle regions—49 percent, bringing the herd to 1.3 million in 1980. Expansion will occur mainly in Wisconsin and Minnesota. Reasons for the increase are much the same as in the Corn Belt, with the additional incentives of a good potential for grass legume forages and a continuing shift out of dairy production.

The Southwest's estimate puts the inventory at 9.7 million head in 1980—8 percent more than 10 years earlier. The experts project a slower growth rate than in the eastern U.S., partly because of the large initial base of herd size and partly because of limited potential for greater production. Oklahoma will come in for a higher percentage increase than either Arizona, New Mexico, or Texas. But Texas will top the others in terms of sheer numerical increases. Expected gains in this region can be chalked up to better forage production and expanded cattle raising in general, especially along the Gulf Coast and southeastern Texas. In

increase expected nationally, though the Southeast's expansion won't match that of the 1950-70 period. Kentucky's share of the regional total will rise 2 percent between 1970 and 1980, while Florida's drops 1 percent. Factors favoring the buildup: reduced acreages of cotton and tobacco, more specialization in farming, farm consolidation, increasingly scarce and costly farm labor, technological improvements in forage production and use, and a steady trend toward part-time farming.

**Plains Gains.** The Northern Plains is expected to add roughly 2 million beef cows, up 33 percent, for a total of 8.5 million in 1980. The four States in this region will each gain by approximately the same percentage. Most of the expansion is marked for the eastern half and third of the Northern Plains. Cattle raising will be encouraged by improved output and utilization of forage crops, and—though the panel had dissenting opinions—a shift from grain to forage production may also play an important role.

The Southwest's estimate puts the inventory at 9.7 million head in 1980—8 percent more than 10 years earlier. The experts project a slower growth rate than in the eastern U.S., partly because of the large initial base of herd size and partly because of limited potential for greater production. Oklahoma will come in for a higher percentage increase than either Arizona, New Mexico, or Texas. But Texas will top the others in terms of sheer numerical increases. Expected gains in this region can be chalked up to better forage production and expanded cattle raising in general, especially along the Gulf Coast and southeastern Texas. In



range areas, there will be a shift from sheep to goat enterprises, but in other areas, overgrazing and transfer of grazing lands to alternative uses will reduce the number of beef cows.

**Mountain region v. U.S.** The Mountain States' projection indicates nearly the same rate of increase in cow numbers as for the Nation as a whole—21 percent during the 1970's, putting the total at 5.7 million in 1980. Little change is anticipated in Utah and Nevada because of the arid climate and full utilization of existing forages. In other States, the increases will come partly from technological advances in forage production on rangelands. As elsewhere in the U.S., most of the gains will be in the crop farming sections.

The Pacific region will add about 0.2 million beef cows by 1980 (10 percent), with modest increases in all States. Competing uses of land will contain expansion of cow herds in the cropping areas, and the rangelands have the same limitations as other western States.

Altogether, these regional changes point to a national increase in beef cows of 24 percent for the 48 States between 1970 and 1980. The growth rate foreseen by the experts is sub-

stantial any way you look at it. On this point, the experts reached a meeting of the minds.

Turning to the factors that would tend to encourage or discourage expansion of cow numbers, the opinions varied. Nonetheless, ERS found some common threads:

**Government's role.** The majority of the panel members believed that public policy would favor continuing programs to spur expansion of cattle raising. But the respondents felt the impact on beef production would be greatest if accompanied by incentives to shift cropland to forage production on a whole-farm basis.

Beef production in the future may be influenced by restrictions on antibiotics. "How much so," the ERS report said, "will depend on which drugs are withdrawn and what substitutes are found." Increased regulation of herbicides, pesticides, and fertilizers could check crop output and raise forage production.

Higher calving rates would directly contribute to beef supply—they're expected to rise from 90 percent in 1970 to 91.6 percent in 1980—as would lower calf death rates, which are likely to decline from the 5.8-percent rate of 1969.

Though larger herd sizes will be

the case in 1980, a high proportion will still remain in small herds, averaging under 50 head.

About calf weights, the panel figured they'd average about 50 pounds heavier for a 205-day-old steer calf in 1980 for the eastern half of the country, and almost as much in the Southwest. Weight gains would result from improved selection of breeding stock, crossbreeding, and improved nutrition of cows and calves. (10)

## Farm Debt Climbed At Faster Rate Than Assets In 1971-72

Farm assets went up by \$24 billion from the start of 1971 to 1972, and exceeded \$339 billion on January 1, 1972.

Farm debt during the same time increased at a faster rate, up a record \$5.8 billion to \$66.9 billion. The debt-to-asset ratio was thus raised from 19.4 percent in 1971 to 19.7 at the start of '72.

That was the picture for all States except Alaska and Hawaii, ERS reports in a balance sheet compiled for 1972.

Two-thirds of the advance in asset value during 1971 was due to a record \$15.6-billion increase in the value of farm real estate. Most of the remaining third came from increases in value of livestock, machinery, and motor vehicles.

About two-thirds of the rise in farm debt was in non-real estate debt and the remainder was in farm mortgages.

Total realized net farm income of farm operators dropped from \$16.8 billion in 1970 to \$16 billion in 1971. Realized net farm income per farm slipped to \$5,560 in 1971 from \$5,740 in 1970.

On balance, the structure of farm asset values has changed relatively little since 1940. Except for a few years, real estate has accounted for about two-thirds of total value of farm assets.

Among the highlights from the 1972 balance sheet:

Livestock and poultry on farms scored a record value of \$27.3 billion on January 1, 1972, showing a 15-percent rise from a year earlier. The gain mostly reflects higher value per head for cattle, calves, and hogs, as opposed to growth in numbers.

The record value of farmer-owned crop inventories was led by corn and wheat, with larger quantities more than offsetting the lower price at the start of '72. About 50 percent more cotton was in farmers' hands at the start of the year than in '71, and the price was up from 21¢ per pound to 29¢.

Non-real estate farm debt increased a record \$3.6 billion in 1971. The exceptional rise basically reflected the easier availability of loans and interest rates averaging up to 2 percentage points below a year earlier.

Farm real estate debt showed a sharp rise from a year earlier, at-

tributable mostly to lower interest rates and a larger supply of long-term loan funds. Interest rates on new farm mortgage loans fell by as much as 1 percentage point during '71.

Farm proprietors' equity in their farm assets rose a record \$18.5 billion in 1971 with four-fifths of the gain accruing to farm real estate.

Farm assets valued in constant (1967) prices rose \$2.5 billion in 1971. Thus, of the \$24.3-billion increase in current dollar asset value in 1971, an estimated 10.5 percent represented a real gain measured in 1967 prices and the remaining 89.5 percent resulted from higher prices.

The bulk of the real gain since 1967 has been in physical assets other than real estate. Financial assets, because of the decline in the purchasing power of the dollar, showed a small drop from 1967 to 1972. (11)

## Flaxseed Output Halved From 1950 Level

Latex paints may be a boon to "do-it-yourself" homeowners, but not to the Nation's flaxseed producers.

Linseed oil—a major flaxseed product—is the chief drying agent in oil-base paints, which the latex products are displacing in large quantities.

The sluggish demand for linseed oil and other flaxseed products is reflected in a sharp drop in flaxseed production. This year's crop—estimated at 15 million bushels—is the smallest since 1938.

Farm value of flaxseed output has plunged from \$113 million in 1948 to an estimated \$39 million in 1972. The precipitous drop is blamed on smaller crops, coupled with farm returns that have slipped from \$30 to slightly more than \$20 per acre.

Since 1950, roughly 120,000 harvested flaxseed acres have gone out of production each year, an annual decline of 2 percent. Minnesota and North Dakota—with South Dakota, these States produce nearly all the Nation's flaxseed—each lost more than a million acres.

In the tri-State area, flax usually competes for acreage with oats and barley, and to some extent, corn and soybeans. Over the past 2 decades, however, flaxseed has lost competitive strength as prices trended down and yields edged up only slightly.

Crop yields vary widely from year to year, mainly because of changes in weather and growing conditions. Since 1950, per-acre yields ranged from 5.2 bushels in 1957 to 13.4 in 1969. As a rule, yields increase as acreage declines.

Yields are generally larger in Minnesota and South Dakota than in North Dakota.

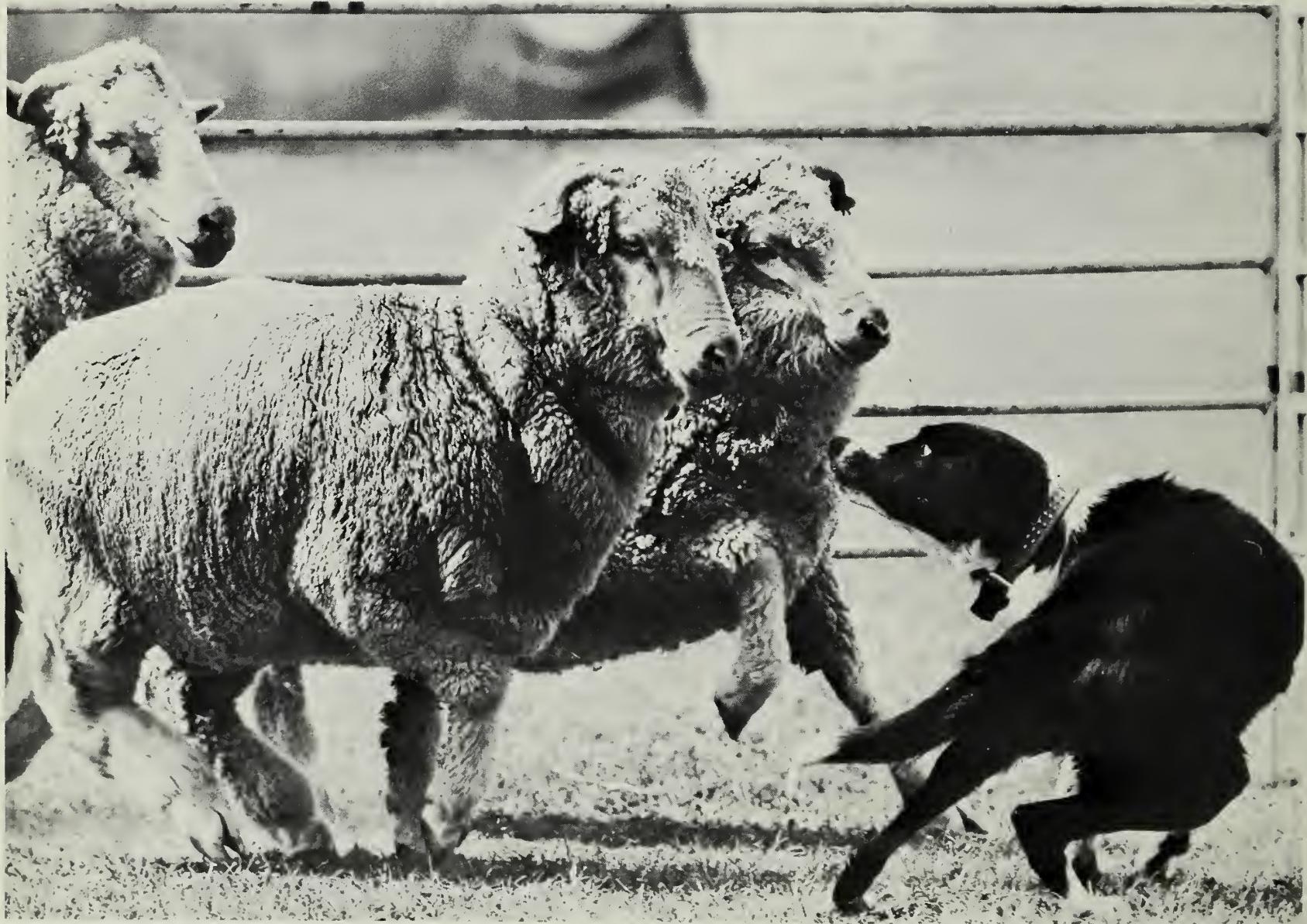
Shifting acreage patterns and the dwindling demand for flaxseed products have trimmed the number of flax-growing farms by more than 80,000 over the last 2 decades to approximately 30,000 farms. Meantime, average acreage in flax production grew from 43 to 80 per farm. (12)

### BALANCE SHEET OF THE U.S. FARMING SECTOR<sup>1</sup>

Item	1940	1960 <sup>2</sup>	1971 <sup>2</sup>	1972 <sup>3</sup>	Change	
					1971 to 1972	1971 to 1972 <sup>4</sup>
<b>ASSETS</b>						
Physical assets:						
Real estate	33.6	130.2	213.0	228.6	15.6	7.3
Non-real estate:						
Livestock and poultry	5.1	15.2	23.7	27.3	3.6	15.5
Machinery and motor vehicles	3.1	22.7	33.8	36.4	2.6	7.5
Crops stored on and off farms <sup>5</sup>	2.7	7.7	10.7	11.8	1.1	10.7
Household equipment and furnishings	4.2	9.6	10.1	10.3	.2	1.1
Financial assets:						
Deposits and currency	3.2	9.2	12.4	13.1	.7	5.6
U.S. savings bonds	.2	4.7	3.6	3.7	.1	2.3
Investments in cooperatives	.8	4.2	7.6	8.0	.4	5.6
Total	52.9	203.5	314.9	339.2	24.3	7.7
<b>CLAIMS</b>						
Liabilities:						
Real estate debt	6.6	12.1	29.5	31.3	1.8	6.3
Non-real estate debt:						
Excluding Commodity Credit Corporation	3.0	11.6	29.7	33.3	3.6	11.9
Commodity Credit Corporation <sup>6</sup>	.4	1.1	1.9	2.3	.4	20.6
Total liabilities	10.0	24.8	61.1	66.9	5.8	9.4
Proprietors' equities	42.9	178.7	253.8	272.3	18.5	7.3
Total	52.9	203.5	314.9	339.2	24.3	7.7
Debt-to-asset ratio (percent) <sup>4</sup>	18.9	12.2	19.4	19.7	—	—

<sup>1</sup> For 48 States. As of Jan. 1, specified years. <sup>2</sup> Revised. <sup>3</sup> Preliminary. <sup>4</sup> Computed from unrounded data. <sup>5</sup> All crops held on farms including crops under loan to Commodity Credit Corporation and crops held off farms as security for CCC loans. On Jan. 1, 1972, the latter totaled \$881 million. <sup>6</sup> Nonrecourse CCC loans secured by crops owned by farmers and included as assets in this balance sheet.

# Australia



**P**icture a country four-fifths the size of the U.S. but with 6 percent as many people... with generally poor soil... arid or semi-arid conditions throughout much of its central area... and plagued by frequent, long-lasting droughts.

A poor, backward nation?

Not Australia, the country "down under" that ranks fourth among all nations in agricultural exports—behind the U.S., France, and the Netherlands.

Australia is the world's largest supplier of wool—accounting for about half of world wool exports.

It supplies nearly one-fifth of the world's wheat exports.

**Big beef supplier.** And—of particular interest to the U.S.—it supplies 15 percent of the world's beef and veal exports. It's our biggest supplier of imported fresh, chilled, and frozen beef and one of the few countries in a position to take advantage of this year's suspension of U.S. quotas on meat imports.

Last year, the U.S. imported 530 million pounds of meat (mostly boneless) from Australia. Through the first 8 months of 1972, we had imported 442 million pounds, and this figure may reach 650 million pounds by the end of the year.

Almost all of Australia's meat is further processed here before it reaches the American consumer—going into hamburger, TV dinners, frankfurters, sausage products,

*Australian sheep (top photo) are the world's leading suppliers of wool, and Australian wheat (bottom right) accounts for a fifth of world wheat exports. But beef leads all Australian agricultural exports to the U.S. Here, a modern 'roundup' takes place at Esperance (far left) and polled Herefords are judged in Sydney (center).*

canned soup, and baby foods.

Beef and veal, by far, exceed any other U.S. import from Australia. In 1971/72, beef and veal imports were valued at more than \$300 million, three-fourths of our total agricultural imports from Australia.

Other major imports include mutton, lamb, sugar, and wool. Together with beef and veal, they account for around 90 percent of U.S. agricultural imports from Australia.

On the other side of the ledger, we export to that country some \$35 million worth of agricultural products. Tobacco tops the list, with other major exports including grapefruit and grapefruit juices, pulses, soybean oilcake and meal for animal feed, sausage casings, grass seeds, and soybean oil.

**U.S.-Australian competition.** Australia also competes with the U.S. in world agricultural trade in several commodities—particularly wheat, feed grains, dried and canned fruits, and hides and skins.

Australia has managed to overcome many of its natural handicaps through a combination of good luck, technology, science, and energy.

Wool moved into the forefront early in Australia's agricultural trade, due in part to early emphasis on fine wool sheep such as Merino.

Wheat came along not too many years later, with the settling of South Australia in the 1830's. There, emphasis was put on wheat growing. Favorable climate and easily cleared land made this area for years the country's breadbasket.

**Late starter.** The beef industry didn't develop until the 1880's when refrigeration was perfected for shipping perishable products to Europe.

In a study of the livestock and grain production dominating Australia's agriculture, ERS notes that there's a shift underway from wool and wheat to beef, feed grains, and oilseeds. The reasons are extremely low wool prices in recent years and a wheat delivery quota system which stimulated farmers to look to alternative crops.

Despite the fact that much of Aus-

tralia is undeveloped or underdeveloped, despite recurring drought, poor transportation facilities, limited rainfall, and low soil fertility, the overall trend of Australia's production is upward.

Perhaps the most important factor is the improvement of pastures.

Much of the land considered barren turned out to be lacking certain trace elements—and thus easily converted to productive pasture by adding minute quantities of the elements along with fertilizer.

The problem of the prolific and voracious rabbit—introduced into Australia as game but later to become a real economic problem to farmers—was finally controlled by the virus disease myxomatosis.

New plant varieties, increased use of fertilizer, low-cost techniques for clearing land, and use of light aircraft for seeding and fertilizing have also contributed to more productive pastureland.

(Cont.)

### Cattle 'Down Under'

Historically, European breeds of beef cattle—Hereford, Short-horn, and Aberdeen Angus—have dominated the Australian beef industry.

But in recent years, particularly in northern Australia, tropical beef breeds and their crosses are showing strong gains.

The European breeds are frequently crossed with the Zebu and Brahman cattle from Asia for heat tolerance and tick resistance, with the added bonus of hybrid vigor. Several crosses, especially the Droughtmaster and Santa Gertrudis, also exhibit these same desirable characteristics.

The use of two newer breeds—Charolais and Murray Grey—reflects a trend toward producing larger animals. Both breeds have shown ability to gain weight rapidly and are being used in crossbreeding programs, particularly in Queensland, the major beef-producing State.

Most of Australia's beef cattle are grass fed and studies indicate feedlots wouldn't be profitable on a large scale because of high feed prices relative to beef prices. (14)

ERS made projections of Australia's grain and livestock production to 1975 based on a number of assumptions: a 5-percent rise in wheat quotas by 1975 . . . wheat, oats, and barley prices near base levels of 1966/67-1968/69 . . . sorghum and corn prices 5¢ to 10¢ per bushel higher than in the base period . . . and beef, mutton, and lamb prices showing some decline on the home market by 1975 in light of increased production.

Under these assumptions, wheat output in 1975 would total 375 million bushels. However, a decision to purposely produce feed wheat as well as bread wheat could substantially alter this projection. Also, recent strengthening of the world wheat

market because of large purchases by the USSR could lead to a higher level of output if weather conditions are favorable.

Barley output in 1975 would exceed 144 million bushels (up from just under 60 million in 1966/67-1968/69), and grain sorghum would reach 54 million bushels (nearly a fourfold increase over the base period).

With an assumed wool price of 38-40¢ a pound and with some decline in the rate of increase in costs, sheep numbers by 1975 would climb to 187 million. (An unexpected rise in demand for wool has lead to a sharp increase in wool prices in 1972.) Coupled with a slight increase in fleece weights, there would be

about 2.1 billion pounds of wool in 1975, compared with 1.8 billion pounds in the base period. (Despite the recent wool price increase, high slaughter rates in 1970 and 1971 could keep wool output near the projected level.)

The beef herd, meanwhile, would increase at 5.5 percent annually from the base period with beef and veal output reaching 1.4 million tons. However, barring severe drought in major cattle producing areas, this projection may be conservative as beef cattle numbers have increased at a faster rate than most people anticipated. Lamb production would also rise by about 3 percent a year as producers breed more ewes to meat-type rams. (13)

#### *Addresses of State experiment stations:*

This ready reference list for readers wishing to order publications and source material published through State experiment stations will be updated again in July 1973.

STATE	CITY	ZIP CODE	STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830	NEW HAMPSHIRE	Durham	03824
ALASKA	University of Alaska	99701	NEW JERSEY	New Brunswick	08903
ARIZONA	Tucson	85721	NEW MEXICO	Las Cruces	88001
ARKANSAS	Fayetteville	72701		N.M. State University (P.O. Box 3-AG)	
CALIFORNIA	Berkeley	94720		Ithaca	14850
	Davis	95616	NEW YORK	(Cornell Station)	
	Parlier	93648		Geneva	14456
	Riverside	92502		(State Station)	
	(Citrus Research Center)			Raleigh	27607
COLORADO	Fort Collins	80521	NORTH CAROLINA	(Box 5847)	
CONNECTICUT	New Haven	06504		Fargo	58102
	Storrs	06268	NORTH DAKOTA	(State University Station)	
DELAWARE	Newark	19711		Columbus	43210
FLORIDA	Gainesville	32601	OHIO	(Ohio State University)	
GEORGIA	Athens	30601		Wooster	44691
	Experiment	30212		Stillwater	74074
	Tifton	31794	OKLAHOMA	Corvallis	97331
HAWAII	Honolulu	96822	OREGON	University Park	16802
IDAHO	Moscow	83843	PENNSYLVANIA	(106 Armsby Building)	
ILLINOIS	Urbana	61801		Rio Piedras	00928
INDIANA	Lafayette	47907	PUERTO RICO	Kingston	02881
IOWA	Ames	50010	RHODE ISLAND	Clemson	29631
KANSAS	Manhattan	66502	SOUTH CAROLINA	Brookings	57006
KENTUCKY	Lexington	40506	SOUTH DAKOTA	Knoxville	37901
LOUISIANA	Baton Rouge	70803	TENNESSEE	College Station	77843
MAINE	Orono	04473	TEXAS	Logan	84321
MARYLAND	College Park	20742	UTAH	Burlington	05401
MASSACHUSETTS	Amherst	01002	VERMONT	Blacksburg	24061
MICHIGAN	East Lansing	48823	VIRGINIA	Pullman	99163
MINNESOTA	St. Paul	55101	WASHINGTON	Morgantown	26506
MISSISSIPPI	State College	39762	WEST VIRGINIA	Madison	53706
MISSOURI	Columbia	65201	WISCONSIN	Laramie	82070
MONTANA	Bozeman	59715	WYOMING	(University Station Box 3354)	
NEBRASKA	Lincoln	68503			
NEVADA	Reno	89507			

# Recent Publications

*Bangladesh's Agricultural Situation: A Brief Appraisal.* John B. Parker, Jr., and Reed E. Friend, Foreign Demand and Competition Division. ERS-For. 344.

Bangladesh (formerly East Pakistan) ranks as one of the poorest and most deprived nations in the world. Average per capita yearly income is estimated at around \$75. Hunger and malnutrition, due to natural calamities and rapid population increases, are persistent problems. Civil war and armed conflict in 1971 and lingering internal strife in 1972 have heightened the threat of food shortages this year. This paper comments on the threat and on prospects for solution—both short and long term.

*The 1972 Agricultural Data Book for the Far East and Oceania.* Foreign Demand and Competition Division. ERS-For. 267.

This is the sixth annual *Agricultural Data Book* for the Far East and Oceania. Published in conjunction with *The Far East and Oceania Agricultural Situation*, it provides current and historical data on production and trade of agricultural products by the countries in those areas. These data are useful in reviewing the current agricultural situation in the major food-deficit areas of the world, including the South Asian subcontinent, Vietnam, and Japan, the No. 1 market for U.S. agricultural products.

*State Water-rights Laws and Related Subjects: A Supplemental Bibliography, 1959 to Mid-1967.* George G. Simons, University of Wisconsin; Beatrice H. Holmes, and Harold H. Ellis, Natural Resource Economics Division. Miscellaneous Publication 1249.

This bibliography supplements one on the same subject, *Miscellaneous Publication 921*, December 1972. Included in this supplement are citations, with major topics, of more recent publications on State water-rights laws. Also cited are related publications, including works on

Federal, interstate, and international matters involving or related to waterrights.

*Economic and Operational Characteristics of Colorado Range Cattle Business.* C. Kerry Gee, Colorado State University Experiment Station in cooperation with Farm Production Economics Division. Colo. State University Agr. Expt. Sta. Bull. 550S.\*

This bulletin describes economic and operating characteristics of range cattle business in Colorado based on a sample survey of 194 ranch operations.

Single copies of the publications listed here are available free from The Farm Index, Office of Management Services, U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (\*) may be obtained only by writing to the experiment station or university. For addresses, see the July and December issues of The Farm Index.

*Structural Characteristics and Income Levels of Burley Tobacco Producers in Two Kentucky Counties.* Frederic L. Hoff and John G. Stovall, Farm Production Economics Division, and Garnett L. Bradford, University of Kentucky. University of Kentucky Agri. Expt. Sta. Research Report 12, June 1972.\*

The purpose of this report is to summarize and contrast tenure arrangements, resource suppliers, and income of several categories of burley growers in two Kentucky counties—Bourbon and Metcalfe.

*Texas Rice: An Economic Overview—Current Economic Research—Research Needs.* Randall Stelly, Texas A. & M. University; J. Bruce Hottel and Warren R. Grant, Farm Production Economics Division. Texas A. & M. Agri. Expt. Sta. Information Report 72-3.\*

This study looks into the market overview, land tenure and resources, farmer production costs and returns, and legislation affecting the Texas rice industry.

*Resource Adjustment in the Fertilizer Industry With Emphasis on Michigan.* David M. Bell, Marketing Economics Division; George R. Perkins, University of Florida; David L. Armstrong, Michigan State University; and Dennis R. Henderson, Ohio State University. MRR 974.

This study was undertaken to investigate the economic environment in which firms operate in the Michigan fertilizer industry. It is designed to study decisionmaking policies in manufacturing, distribution, and transportation, and how these decisions have affected the fertilizer industry in general.

*Capitalization of Farm Program Benefits Into Land Values.* Robert D. Reinsel and Ronald D. Krenz, Farm Production Economics Division. ERS 506.

This report summarizes current information on program returns and on the process of capitalization of these returns. Some of the conceptual problems discussed involve measurement of the benefits and the method of capitalization. Although the data used are imperfect and the final estimates may be subject to error, they may provide new insight and stimulate further inquiry into the problem of capitalization.

*Effects of Changes in Agricultural Legislation on Farms Producing Peanuts in Georgia.* William D. Givan, Farm Production Economics Division, and University of Georgia, Athens. Research Bull. 117.\*

Among other findings of this study, certain modifications in the present peanut program would produce a decrease in income on the farms studied. The income loss could be replaced through an increase in the sale price of other crops sold if a free market price, with direct payment to producers, was in effect.

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# Article Sources

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# Economic Trends

Item	Unit or Base Period	1967	1971			1972	
			Year	Sept.	July	Aug.	Sept.
<b>Prices:</b>							
Prices received by farmers	1967=100	—	112	111	127	128	128
Crops	1967=100	—	107	104	116	119	117
Livestock and products	1967=100	—	116	117	136	135	137
Prices paid, interest, taxes and wage rates	1967=100	—	120	121	127	127	128
Family living items	1967=100	—	119	120	125	125	126
Production items	1967=100	—	115	116	122	122	124
Ratio <sup>1</sup>	1967=100	—	94	92	100	101	100
Wholesale prices, all commodities	1967=100	—	113.9	114.5	119.7	119.9	120.2
Industrial commodities	1967=100	—	114.0	115.0	118.1	118.5	118.7
Farm products	1967=100	—	112.9	110.5	128.0	128.2	128.6
Processed foods and feeds	1967=100	—	114.3	114.6	121.5	121.0	121.8
Consumer price index, all items	1967=100	—	121.3	122.2	125.5	125.7	126.2
Food	1967=100	—	118.4	119.1	124.2	124.6	124.8
<b>Farm Food Market Basket:</b> <sup>2</sup>							
Retail cost	Dollars	1,081	1,244	1,250	1,322	1,322	1,320
Farm value	Dollars	419	477	472	544	530	539
Farm-retail spread	Dollars	662	767	778	778	792	781
Farmers' share of retail cost	Percent	39	38	38	41	40	41
<b>Farm Income:</b> <sup>3</sup>							
Volume of farm marketings	1967	100	111	124	104	109	118
Cash receipts from farm marketings	Million dollars	42,693	53,063	4,888	4,369	4,810	5,400
Crops	Million dollars	18,434	22,609	2,153	1,747	1,857	2,300
Livestock and products	Million dollars	24,259	30,454	2,735	2,622	2,953	3,100
Realized gross income <sup>4</sup>	Billion dollars	49.0	60.1	60.4	—	—	66.1
Farm production expenses <sup>4</sup>	Billion dollars	34.8	44.0	44.3	—	—	47.3
Realized net income <sup>4</sup>	Billion dollars	14.2	16.1	16.1	—	—	18.8
<b>Agricultural Trade:</b>							
Agricultural exports	Million dollars	—	7,695	750	682	684	710
Agricultural imports	Million dollars	—	5,825	650	472	564	547
<b>Land Values:</b>							
Average value per acre	Dollars	<sup>6</sup> 168	<sup>7</sup> 201	—	—	—	<sup>8</sup> 217
Total value of farm real estate	Billion dollars	<sup>6</sup> 181.8	<sup>7</sup> 213.0	—	—	—	<sup>8</sup> 228.6
<b>Gross National Product:</b> <sup>4</sup>							
Consumption	Billion dollars	793.9	1,050.4	1,056.9	—	—	1,162.2
Investment	Billion dollars	492.1	664.9	670.7	—	—	728.1
Government expenditures	Billion dollars	116.6	152.0	152.2	—	—	181.0
Net exports	Billion dollars	180.1	232.8	233.6	—	—	256.6
	Billion dollars	5.2	.7	0.4	—	—	—3.4
<b>Income and Spending:</b> <sup>5</sup>							
Personal income, annual rate	Billion dollars	629.3	861.4	872.2	932.9	940.0	945.7
Total retail sales, monthly rate	Million dollars	26,151	34,071	35,219	37,342	37,843	37,297
Retail sales of food group, monthly rate	Million dollars	5,759	7,437	7,516	7,956	7,930	—
<b>Employment and Wages:</b> <sup>5</sup>							
Total civilian employment	Millions	74.4	79.1	79.5	<sup>9</sup> 81.7	<sup>9</sup> 82.0	<sup>9</sup> 82.2
Agricultural	Millions	3.8	3.4	3.4	<sup>9</sup> 3.4	<sup>9</sup> 3.6	<sup>9</sup> 3.6
Rate of unemployment	Percent	3.8	5.9	6.0	5.5	5.6	5.5
Workweek in manufacturing	Hours	40.6	39.9	39.6	40.6	40.6	40.7
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.56	3.60	3.78	3.80	3.85
<b>Industrial Production:</b> <sup>5</sup>							
<b>Manufacturers' Shipments and Inventories:</b> <sup>5</sup>							
Total shipments, monthly rate	Million dollars	46,449	55,580	55,682	61,869	63,186	—
Total inventories, book value end of month	Million dollars	84,599	101,665	101,413	103,888	104,569	—
Total new orders, monthly rate	Million dollars	46,763	55,473	55,489	62,504	64,300	—

<sup>1</sup> Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. <sup>2</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. <sup>3</sup> Annual and quarterly data are on 50-State basis. <sup>4</sup> Annual rates seasonally adjusted third quarter. <sup>5</sup> Seasonally adjusted. <sup>6</sup> As of March 1, 1967. <sup>7</sup> As of March 1, 1971.

<sup>8</sup> As of March 1, 1972. <sup>9</sup> Beginning January 1972 data not strictly comparable with prior

data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

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